

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior listing of claims in this application.

Claims 1-11 (canceled).

12. (currently amended) A lens actuator for use with an optical disk apparatus for recording and reproducing information by irradiating light condensed by an objective lens to an optical disk while rotating the optical disk by a spindle motor, said lens actuator actuating the objective lens to a tracking direction and to a focus direction by a magnetic operation, said lens actuator comprising:

a base;

a holder relatively moving to the tracking direction and the focus direction with respect to the base and holding the objective lens;

an elastic supporting member supporting the holder; and

a fixed block provided on the base and fixing the elastic supporting member.

wherein a ~~tangential-shafting~~ roll resonance frequency is set to be a setting value different from a rotation frequency of the spindle motor in that the rotation frequency corresponds to a multiple value of a standard data transmission speed in the optical disk.

13. (previously presented) The lens actuator as claimed in claim 12, wherein the setting value is a frequency higher than the rotation frequency of the spindle motor in a case in which the spindle motor is rotated at eight times the standard data transmission speed.

14. (previously presented) The lens actuator as claimed in claim 13, wherein the setting value is a frequency lower than the rotation frequency of the spindle motor in a case in which the spindle motor is rotated at thirty two times the standard data transmission speed.

15. (previously presented) The lens actuator as claimed in claim 14, wherein the setting value is approximately 90Hz.

16. (currently amended) A lens actuator for use with an optical disk apparatus for recording and reproducing information by irradiating light condensed by an objective lens to an optical disk while rotating the optical disk by a spindle motor, said lens actuator actuating the objective lens to a tracking direction and to a focus direction by a magnetic operation, said lens actuator comprising:

a base;

a holder relatively moving to the tracking direction and the focus direction with respect to the base and holding the objective lens;

an elastic supporting member supporting the holder;

a fixed block provided on the base and fixing the elastic supporting member; and

a damper member provided to the elastic supporting member for a resonance attenuation,

wherein the damper member is filled in the fixing block and has a feature of obtaining a maximum attenuation or a maximum loss in a vicinity of a ~~tangential-shafting~~ roll resonance frequency.

17. (currently amended) A lens actuator for use with an optical disk apparatus for recording and reproducing information by irradiating light condensed by an objective lens to an optical disk while rotating the optical disk by a spindle motor, said lens actuator actuating the objective lens to a tracking direction and to a focus direction by a magnetic operation, said lens actuator comprising:

a base;

a holder relatively moving to the tracking direction and the focus direction with respect to the base and holding the objective lens;

an elastic supporting member supporting the holder;

a fixed block provided on the base and fixing the elastic supporting member; and

a damper member provided to the elastic supporting member for a resonance attenuation,

wherein the damper member is filled in the fixing block and has a feature of obtaining a maximum attenuation or a maximum loss in a vicinity of a use ~~maximum rotation~~ roll resonance frequency.

18. (currently amended) A lens actuator for use with an optical disk apparatus for recording and reproducing information by irradiating light condensed by an objective lens to an optical disk while rotating the optical disk by a spindle motor, said lens actuator actuating the objective lens to a tracking direction and to a focus direction by a magnetic operation, said lens actuator comprising:

a base;

a holder relatively moving to the tracking direction and the focus direction with respect to the base and holding the objective lens;

an elastic supporting member supporting the holder;

a fixed block provided on the base and fixing the elastic supporting member; and

a damper member provided to the elastic supporting member for a resonance attenuation,

wherein the damper member is filled in the fixing block and has a feature of obtaining a maximum attenuation or a maximum loss in a vicinity of a use maximum rotation frequency to a vicinity of a ~~tangential-shafting~~ roll resonance frequency.